CLAIMS

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1. A surveillance method for providing remote surveillance of an internal area of a building, comprising:

receiving a surveillance image from a local camera directed at the internal area of the building;

comparing the surveillance image with a reference image to produce a comparison result;

detecting presence of an activity condition based on the comparison result; and

notifying an interested user of the activity condition when the presence of the activity condition is detected.

2. A surveillance method as recited in claim 1, wherein said detecting of the presence of the activity condition comprises:

comparing the comparison result with a predetermined threshold;

detecting the presence of the activity condition when the comparison result exceeds the predetermined threshold; and

detecting the lack of presence of the activity condition when the comparison result does not exceed the predetermined threshold.

3. A surveillance method as recited in claim 1, wherein said notifying comprises:

transmitting the surveillance image to a remote computer over a network when the activity condition is detected.

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4. A surveillance method as recited in claim 3,

wherein the network includes the Internet, and

wherein said transmitting operates to transmit the surveillance image over the Internet to the remote computer.

5. A surveillance method as recited in claim 4, wherein the remote computer is one of a personal computer and a network server.

6. A surveillance method as recited in claim 4, wherein said transmitting comprises:

forming an electronic mail message having a predetermine mailing address, the predetermined mailing address being associated with the interested user; and

electronically mails the surveillance image to the remote computer over the Internet.

7. A surveillance method as recited in claim 6, wherein said notifying further comprises:

providing a distinctive audio or visual indication on the remote computer to notify the interested user of the receipt of the activity condition after the electronically mailed surveillance image arrives at the remote computer.

A system for providing remote visual monitoring of a location, said system comprising:

a camera for obtaining an image of the location;

a remote computer having a display device capable of viewing images, said remote computer being remote from the location;

a local image controller operatively connected to said camera, said local image controller operates to receive the image from the camera and then to determine whether an activity condition is present,

wherein said local image controller forwards the image to said remote computer over a network when the activity condition is present, and said local image controller does not forward the image to said remote computer over the network when the activity condition is not present.

9. A system as recited in claim 8, wherein the network includes the Internet, and

wherein said local image controller forwards the image to said remote computer by establishing a network connection to the Internet, and directing the transmission of the image over the Internet to the remote computer.

10. A system as recited in claim 8, wherein the network includes the Internet, and

wherein said local image controller automatically creates an electronic mail message to a predetermined user associated with the remote computer, the electronic mail message having the image included or attached thereto, and then automatically sends the electronic mail message to said remote computer for the predetermined user.

11. A system as recited in claim 10, wherein said remote computer obtains the image that has been transmitted and displays the image on the display device.

12. A system as recited in claim 8, wherein said local image controller determines whether an activity condition is present based on the image.

13. A system as recited in claim 8, wherein said system further comprises a motion detector for producing a motion indication signal, and

wherein said local image controller receives the motion indication signal and determines whether an activity condition is present based on the motion indication signal.

14. A system as recited in claim 13, wherein said motion detector and said camera is directed at the location from approximately the same direction.

15. A system as recited in claim 14, wherein said motion detector is mounted on said camera.

16. A system as recited in claim 8, wherein said system further comprises a security system having at least one sensor, and

wherein said security system detects an alarm condition, the activity condition is made to be present regardless of the image.

17. A system as recited in claim 8, wherein said system further comprises a security system having at least one sensor, and

wherein said security system detects an alarm condition, said local image controller causes the image and alarm status information to be forwarded over the network to said remote computer.

18. A system as recited in claim 17, wherein the image and the alarm status information are displayed on a display device of the remote computer.

19. A method for controlling an information appliance at a local location from a remote location, said method comprising:

(a) providing an information appliance capable of being controlled at a local location, the information appliance being electrically connected to a local computer, and the local computer capable of being electrically connected to a network of computers;

(b) displaying a graphical control screen on a remote computer at a remote location, the control screen including a plurality of selectable control actions for the information appliance, and the remote computer capable of being electrically connected to the network of computers;

(c) selecting at least one of the control actions for the information appliance at the local location to perform;

(d) forming a control message for the information appliance;

(e) electrically transmitting the control message from the remote computer to the local computer;

(f) sending control signals from the local computer to the information appliance in accordance with the control message; and

(g) controlling the information appliance based on the control signals.

20. A method as recited in claim 19, wherein the network is the Internet.

21. A method as recited in claim 19, wherein said transmitting (e) uses electronic mail.

22. A method for obtaining, at a remote location, status information from a information appliance at a local location, said method comprising:

(a) providing an information appliance capable of being controlled at a local location, the information appliance being electrically connected to a local computer, and the local computer capable of being electrically connected to a network of computers;

(b) sending a status request from a remote computer to the local computer for status information on the controllable device, the remote computer capable of being electrically connected to the network of computers;

(c) determining, by the local computer, the status information for the controllable device;

(d) electrically transmitting the determined status information from the local computer to the remote computer; and

(e) displaying a graphical status screen on the remote computer, the status screen including the determined status information.

23. A method for remotely controlling home appliances associated with a home over an Internet network, comprising the operations of:

connecting the home appliances to a first processing unit located in the home, with the first processing unit capable of coupling to the Internet network;

communicating a control signal through a graphical user interface associated with a second processing unit that is remotely located from the first processing unit and also capable of coupling to the Internet network;

wherein the control signal is directed to at least one of the home appliances via the Internet network, and the control signal causes a change in an operating state of

the at least one of the home appliances when received by the at least one of the home appliances.

24. A method as recited in claim 23, wherein the home appliances are selected from the group consisting of a home lighting system, a home alarm system, a home entertainment system, a water gardening system, a home heating system, a home cooling system, and a television system.

25. A method as recited in claim 23,

wherein the at least one of the home appliances is a television system reciting television broadcasts over a plurality of channels, the television system being associated with a digital data storage device in the home that is able to store a limited amount of digital data associated with the television broadcasts, and

wherein the graphical user interface includes a selection screen for controlling selection of the channels to record the associated television broadcasts in the digital data storage device.

26. A method for detecting an activity condition using a camera, comprising the acts of:

(a) receiving a reference image from a camera directed in a predetermined direction;

(b) storing a reference image;

(c) receiving a current image from a camera directed in the predetermined direction;

(d) comparing the current image with the reference image to detect an activity condition; and

(e) signaling an alarm condition when said comparing detects the activity condition.

27. A method as recited in claim 26, wherein said signaling (e) of the alarm condition produces an audio sound.

28. A method as recited in claim 26, wherein said signaling (e) of the alarm condition comprises:

storing a sequence of images from the camera upon detecting the activity condition so as to obtain a visual record of the alarm condition.

29. A method as recited in claim 28, wherein said signaling (e) of the alarm condition further comprises:

producing an audio sound upon detecting the activity condition.

30. A method as recited in claim 29, wherein said comparing (d) of the current image with the reference image to detect the activity condition comprises:

determining a difference value between the current image and the reference image;

comparing the difference value with a predetermined threshold value; and

detecting the activity condition when the difference value exceeds the predetermined threshold value.

SUB A5 31. A method as recited in claim 28, wherein the activity condition is indicates detection of an intruder, and wherein the sequence of images is a video clip.